REMARKS

Applicants have amended the claims to more particularly define the invention taking into consideration the outstanding Official Action and the level of one of ordinary skill in the art to which the invention pertains as evidenced by the references of record. All the claims have been canceled from the application and replaced with a parallel set of claims, claims 17-29. Applicants most respectfully submit that all the claims now present in the application are in full compliance with 35 U.S.C. 112 and are clearly patentable over the references of record.

The rejection of claims 1-16 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been carefully considered but is most respectfully traversed in view of the amendments to the claims. Claim 17 is a combination of claims 1 and 2. As would be appreciated by one of ordinary skill in the art from Applicants' specification, taking into consideration the level of skill possessed by one of ordinary skill in the art as evidenced by the prior art of record, it is clear that Applicants' invention relates to a complex of a cyanine dye and TCNQ which is represented by the generic structural formula (I). As would be appreciated by one of ordinary skill in the art, Q and Q' are aromatic and polyaromatic groups necessary to form a cyanine dye of formula (I). Therefore, in rewriting this claim, these groups have been so designated and the meaning of these terms is definite to one of ordinary skill in the art. See for example, the allowed claims in the prior art, U.S. Patent 5,579,150, claim 1. Also note the associated positive and negative signs associated in the formula. Accordingly, it is most respectfully requested that this aspect of the rejection be withdrawn.

Claim 17 contains the limitation from claim 2 which further defines the nitrogen containing substituents as set forth in original claim 2 and this amendment is clearly supported by Applicants' specification and claims as originally filed. Thus, the amended claims are fully supported by Applicants' specification, as originally filed and are in full

compliance with 35 USC 112. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claims 1, 5 and 14-16 under 35 U.S.C. 102(b) as being fully anticipated by Cho et al. '150, JP 63-064794, Morishima et al., Cho et al., Mol. Cryst. Liq. Cryst. references and Morishima et al. '491 have been carefully considered but are most respectfully traversed in view of the amendments to the claims including the limitations from claim 2 into claim 1. Claim 2 was not included in any of the anticipation rejections and therefore it is most respectfully requested that each of the anticipation rejections be withdrawn in view of the limitations in amending the claims by including the limitations from claim 2 into the new claim set.

The rejection of claims 1, 3-5 and 10-16 as unpatentable over Liao et al. combined with Morishima et al. has been carefully considered but is most respectfully traversed in view of the amendments to the claims.

Finally, the rejection of claims 1-16 under 35 U.S.C. 103 as being unpatentable over Liao et al. combined with Morishima et al. and further in view of Sato et al. has also been carefully considered but is most respectfully traversed in view of the amendments to the claims.

Applicants wish to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a

claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicants also most respectfully direct the Examiner's attention to MPEP § 2144.08 (page 2100-114) wherein it is stated that Office personnel should consider all rebuttal argument and evidence present by applicant and the citation of In re Soni for error in not considering evidence presented in the specification.

As noted on page 3 of Applicants' specification, the object of the present invention is to solve the drawbacks in the prior art compositions. One problem is that organic compounds containing the polymethine structure have the problem of poor photostability. General cyanine dyes also have the same problem since they belong to this kind of compound. Therefore, it is necessary to develop a new type of cyanine dye having photostability. As noted at the top of page 3 of Applicants' specification, the addition of neutral TCNQ derivative to dye increases the photostability of the dye, however, TCNQ is not quite soluble in common organic solvents over the contents of doping dye formulations limited, therefore the stability effect is also limited.

As further noted on page 3, the present invention relates to a cyanine dye-TCNQ dye complex which is generally represented by formula (I). Specific complexes within the generic formula (I) include those of formula (II), (III) and (IV) having high absorption for light, resisting the damage of dye from the UV light and the singlet oxygen. In accordance with this invention, the complex has a high oxidation potential to prevent the oxidation of dyes and in which the dye can adjust the primary absorption position with wavelength in the range of 400 to about 800 nm and possess high fluorescent quantum efficiency. Note also the specific experimentation contained in Applicants' specification and the specific results obtained for the combination of complex set forth in Applicants' claims. For example, as noted at page 18, line 14, it means that TCNQ possesses the better inhibition of singlet oxygen attacking the main part of the cyanine dye. Therefore, dyes possess excellent photostability without the addition of photostabilizing agent.

Applicants most respectfully submit that there is no motivation in the prior art to make the necessary selection of substituents in combination of dyes in accordance with the present invention, particularly in view of the unique combination of properties exhibited by the presently claimed invention. In re Fritch, 23 USPQ 1780, 1784(Fed Cir. 1992) ("It is impermissible to engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.). The presently claimed invention is therefore clearly unobvious from the prior art of record especially in view of the results clearly demonstrated in Applicants' specification. Accordingly, it is most respectfully requested that this rejection be withdrawn.

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,
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REF:kdd
A01.wpd

January 13, 2003